Financial transactions taxation in the European Union and Croatia

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Abstract

The paper provides a systematic review of what is known about the financial transactions tax, its practical application in EU countries and elsewhere in the world and its impacts on financial markets. A special emphasis is placed on the outlook for the taxation of financial transactions in the EU and the possibilities and constraints in the Republic of Croatia. The results of the analysis show the propensity of countries to the taxation of financial transactions, particularly because speculations on the financial markets before the outbreak of the crisis enabled high economic rents to be generated, while during the crisis period, failed speculations were paid for with ample government support because of the fear that the stability of the financial sector would be distorted. Analysis of the possibility of taxing the Croatian capital market according to the proposed European model shows that the inclusion of the Republic of Croatia in the common taxation procedure would be justified, although the revenue from such a tax would be relatively small.

Keywords: financial transactions tax, taxation of the capital market in the EU and Croatia

1 INTRODUCTION

The world's financial market underwent a surge in development in the two decades before the outbreak of the financial crisis. The turnover of financial transactions at global level in 1995 exceeded the value of world GDP more than twenty times, and in 2007 more than seventy times the turnover of world GDP at that period (European Parliament, 2010). Financial markets, then, are an important tax source, and many states apply various forms of the taxation of financial transactions.

In 2009, leaders of G-20 countries suggested to the IMF that it should investigate the ways in which the financial sector could make a more equitable contribution to public finances. By way of answer, in 2010 the IMF proposed two approaches. The first was based on targeted levies that financial institutions would pay into a common fund, the resources of which would be used for the resolution of failed financial institutions, endeavouring to prevent future crises in the financial sector. The second proposal covered the possibilities of taxing the activities of the financial sector at a general level, that is, the introduction of a tax on financial transactions (FTT, Financial Transaction(s) Tax) and a tax on financial activities (FAT, Financial Activities Tax). Although no G-20 level agreement has been achieved, some countries have begun to tax the financial sector more stringently (IMF, 2010).

In 2011, forty states were implementing some form of tax on financial transactions, most frequently on a unilateral basis, with many specific features in the form and manner of the taxation. In spite of that fact, the relative revenue from the tax is very low, and hardly reaches 0.5% of the GDP of the given country. In the last twenty years before the economic crisis, the importance of this form of taxation had fallen because states had endeavoured to reduce the costs of capital in

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order to enhance the competitiveness of their domestic financial markets (Matheson, 2011).

The following chapter sets out some theoretical considerations about the tax on financial transactions, individual effects on the market are investigated (such as volatility, liquidity, cost of capital, volume, efficacy), tests out the effect on tax revenue and ascertains the tax incidence. Part three refers to the European system of financial transaction taxation. Part four considers the outlook for the taxation of financial transactions in the Republic of Croatia, with a reference to budgetary capacities.

2 THE IMPACTS OF THE INTRODUCTION OF A TAX ON FINANCIAL TRANSACTIONS

The form in which a state becomes involved in market movements via taxation always has certain implications. Those in favour of introducing a financial transactions tax think that it can improve market movements, encourage the development of economic relations and reduce speculative trading, while opponents consider that this type of taxation should increase liquidity.

IMPACTS ON TRADING VOLUME

Empirical studies indicate that greater transaction costs will reduce the volume of trading, while the intensity will depend on market elasticity. Some studies have calculated elasticity exclusively on the basis of changes in the tax rate, but others have taken into their base the difference between purchase and sale, and the most accurate take into consideration the total costs of transactions. If trading volume elasticity is calculated on the basis of some of the components of total transaction costs (changes in the tax rate, bid-ask spreads) then elasticity with respect to total costs will be higher (Matheson, 2011:16).

Elasticity of trading volume with respect to transaction costs depends on the observation period. Thus in the UK, short-term elasticity is -0.5 and long term is -1.7 (Jackson and O'Donnell, 1985). For Sweden, Lindgren and Westlund (1990) determined the elasticity of trading volume with respect to total transaction costs in a range between -0.85 and -1.35.

In financial markets with fixed yields, research has suggested a much more pronounced market reaction to taxation. The introduction of a 0.2 to 3 basis points tax on bond trading in Sweden led to a considerable reduction in the volume of trade. Trading in long-term bonds, for which there is a large number of non-taxable alternatives, was reduced by 85% when the taxation was announced. Trading in short-term debt instruments was reduced by about 20% (Froot and Campbell, 1994).

Elasticity of trading volume on currency markets is estimated in general, with respect to transaction costs, at -0.4. This negative elasticity reflects a wide multilateral taxation base that reduces the possibility of tax evasion (Schmidt, 2007).

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IMPACT ON VOLATILITY

Summers and Summers (1989) considered the impact on price volatility and established that there were positive impacts related to moderation of the instabilities caused by speculative trading because of the smaller amount to which funds were channelled to the financial sector.

Empirical research however confirms the much more complex link between the introduction of a tax and the appearance of short-term price volatility. Medhavan, Richardson and Roomans (1997) claim that price volatility can be explained with the use of four variables: public information, private information, transaction costs and market frictions. The impact of public information on volatility can range between 35 and 46%, of private information between 26 and 31%, of transaction costs between 22 and 35%, and of market frictions between 1 and 4% (Mehavan, Richardson and Roomans, 1997).

Matheson (2011:20) distinguishes short-term and long-term price volatility. By short-term, he means short-term market fluctuations in asset prices that do not deviate essentially from their fundamental value. Long-term and short-term volatility do not necessarily have to be correlated.

Studying the link between short-term price volatility and transaction costs in 23 countries, Roll (1989) found no casual link. Baltagi et al., (2006) also found no important impact of taxation on price volatility. Deregulation of the American stock market reduced transaction costs and price volatility (Jones and Seguin, 1997). Franch and Roll (1986) show that the actual process of trading causes short-term volatility and that the taxation of transactions, reducing the number of trades, can reduce price volatility. Habermeier and Kirilenko (2001) established that a tax increases price volatility and at the same time reduces the volume of trading on financial markets.

Since the tax has the same effect on well-informed investors, who reduce market volatility correcting asset values in the direction of their fundamental value and poorly informed or noise investors who increase price volatility, the net effect of taxation on volatility depends on the microstructure of a given market (De Long et al., 1989).

IMPACT ON LIQUIDITY

Preservation of the liquidity of markets is the primary task of all financial market regulators. Matheson (2011) particularly points out that a financial transactions tax reduces the volume of trading, which can also reduce liquidity and volatility. The influences of liquidity and volatility, then, are complementary to each other.

Although Oxera (2007) claims that the introduction of the UK stamp duty had negative impacts on liquidity, the UK is not considering abolishing this form of taxation, mainly from historical reasons. The stamp duty was the first tax on finan-

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cial transactions and is also the oldest form of taxation in the country that is still being applied (Dieter, 2003). A study carried out with respect to Asian markets shows that a financial transactions tax can reduce liquidity as a result of the reduction of the number of financial transactions (Zhang, 2001).

Imposing a tax on stock exchange transactions can have various effects on liquidity in markets marked by information asymmetry. Subrahmanyan (1998) says that taxation of transactions will reduce liquidity on oligopolistic markets, but not on monopolist, where liquidity can be increased if a monopolist, a market maker, has information of which other traders are deprived, for taxation reduces information asymmetry on the market.

The tax rate has to be placed at a level low enough not to distort the market, while at the same time providing sufficient tax revenue.

IMPACT ON SHARE VALUE AND CAPITAL COSTS

Theoretical models confirm that higher transaction costs, including taxation costs, can lead to a reduction in the value of shares (Kupiecs, 1996). Investors have to bear larger costs when they buy shares, and will demand higher yields, which will tend to produce a reduction in share prices.

Higher transaction costs lead to an increase in the costs of capital of companies whose shares are being traded. A liquidity premium for shares can also be an important factor influencing evaluation. Block (2007) shows that retained shares of companies that are not traded are worth 20 to 25% less than comparable shares. Higher transaction costs, then, increase the cost of capital of companies that issue taxable securities.

It seems clear that because of taxation investors will be ready to keep shares longer and trade in them less, which can reduce their liquidity. Reduced liquidity thus reduces tax revenue, makes it more difficult to sell a financial instrument and ultimately reduces the value of the actual stock.

As for the effect of taxation on the cost of capital, Schwert and Seguin (1993) have estimated that the imposition of a 0.5% securities transaction tax in the USA would lead to an increase in the cost of capital of between 0.1 and 1.8 percentage points. Oxera (2007) estimates that repeal of the stamp tax in the UK would lead to a rise in share prices of 7.2% and a reduction of the cost of capital of between 0.66 and 0.8 percentage points.

IMPACT ON MARKET EFFICIENCY

In an efficient market, asset prices at once reflect all the available information. When new information arrives in an efficient market, investors adjust their assets according to the newly arriving information, which leads to changes in prices. If there are no transaction costs, this adjustment can go on incessantly, with differ-

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ences in prices being pared down at the same time. Since for investors an FTT is a transaction cost, adjustment of prices will be slowed down or in other words a longer period will be required for the newly arriving information to be completely reflected in prices. In this way the taxation of financial transactions can reduce market efficiency (Habermeier and Kirilenko, 2001).

If taxation is considered from the viewpoint of its impact on market efficiency, it can be concluded that reduced transaction costs suit short-term trading in securities and derivatives. Many short-term trades are of a speculative nature based mainly on a technical analysis and hence lead to increased price volatility and the appearance of speculative bubbles. When transaction costs are increased, the number of short-term trades is reduced, which in turn reduces volatility and the possibility that securities will be incorrectly valued.

IMPACT ON TAX REVENUE

One of the main reasons for the introduction of an FTT is to increase tax revenues, which will depend on three parameters: the tax rate, the volume of trading weighted by the average price level and the number of transactions undertaken. When the rates are raised, then tax revenue will also rise; but at the same time the number of transactions effectuated and the volume of trading will fall, and the ultimate impact on tax revenue depends on the elasticity of the market to the increased transaction costs.

In order to reduce the tax burden, investors will endeavour to reduce their trading in short-term securities and will be oriented to long-term securities or to foreign capital markets with lower tax burdens.

Umlauf (1993) also mentions, in addition to the direct effects on tax revenues, that the introduction of an FTT would reduce income from capital gains tax.

TAX INCIDENCE

The greatest burden of the taxation would be shouldered by security holders, and since they are mainly individuals with high incomes, taxation can have a progressive effect (Matheson, 2011).

In the long term, the market will endeavour to equalise the rate of yield on capital in taxed and non-taxed markets. Because of the rise in the cost of capital, companies will try to finance their operations with non-taxable sources. Because of the smaller supply of taxed substitutes and the greater demand for non-taxed financing, yields on taxable sources of financing will fall and the yields on non-taxable will rise, until the yields even out. How much total investment will fall because of a rise in the cost of capital will depend on elasticity of supply and demand. In a small open economy return on capital depends on international market trends, and capital will drain out of a country until the yield after taxation is equal to the yield on the world market. In the long term, then, owners of capital will not bear the

burden of taxation entirely. Since supply of capital is not perfectly elastic in market conditions the yields on capital will fall. The final tax burden thus will be shared by owners of capital and by labour according to the relative elasticities of capital supply and demand (Matheson, 2011).

It can be concluded that taxation of securities transactions will reduce the volume of trading, the reduction depending on the tax rate, the specific features of a given market, the kind of securities, the existence of untaxed substitutes and taxation on competitive capital markets. The impacts of volatility and liquidity are complementary to each other, and the effect of taxation will depend on the microstructure of a given market. Taxation can reduce share value and increase the cost of capital. There is thus a dual effect of taxation on market efficiency. On the one hand taxation increases transaction costs and in this way slows down the adjustment of securities' prices, exerting pressures that reduce market efficiency; on the other hand, by reducing speculative trading, it can also increase market efficiency. Reduced volume of trading because of the reduction of investor profit will also tend to diminish revenue from the taxation of capital gains.

3 A COMMON TAX ON FINANCIAL TRANSACTIONS IN THE EUROPEAN UNION

According to the EC (2012) support of member states to the financial sector between October 2008 and December 31, 2011 came to 1.6 trillion euros, or about 13% of European GDP. Over 60% of this amount related to state guarantees to banks. The European Commission (2013c) estimated that direct benefits from the under-taxation of the financial system came at an annual level of about 18 billion euros (primarily in the context of VAT).

A common FTT should indirectly harmonise the taxation of the financial sector, essential for a proper functioning of the internal market, prevent damaging tax competition in the trading of financial instruments within the EU, and ensure that the financial sector makes a more equitable contribution to public finances.

An essential reason for the introduction of a common FTT is certainly the attempt to prevent suspect and speculative transactions and the provision of tax neutrality among countries, thus contributing to protection against tax evasion.

3.1 BASIC DETERMINANTS OF COMMON TAXATION OF FINANCIAL TRANSACTIONS IN THE EUROPEAN UNION

A common FTT would contribute significantly to the conditions of trading in financial instruments in the EU. Anticipated is the taxation of all financial institutions that trade in basic or derivative financial instruments, even outside organised markets. Transactions with original instruments would be taxed at a minimum rate of 0.1% on the amount of the transaction, and transactions in derivative instruments at a minimum rate of 0.01% on the notional value of the derivative contract. The notional amount of the transaction is considered the taxable amount. In order

to facilitate harmonisation of the application of the FTT, other forms of taxation of financial transactions would not be permitted. However, countries would be able to set their own rates, higher than the minimum, letting them provide additional sources of revenue. Accordingly, only transactions among financial institutions of the participating countries would be taxed. The proposal is based on the triple-A approach, meaning it refers to All markets, All instruments and All actors.

According to European Commission (2013b) the following would be considered financial institutions: investment companies, organised markets, credit institutions, insurance and reinsurance companies, investment funds and investment fund management companies, pensions funds and pensions funds management companies, holding companies, leasing companies, special purpose companies and other institutions as defined by statute. As well as these, other companies that undertake certain financial activities that exceed 50% of their annual income would also be considered financial institutions.

The FTT is primarily aimed at the taxation of financial transactions that are conducted by financial institutions, whether for their own account or the account of some other person. Transactions of the European Central Bank, the central banks of EU member states and competent bodies for the maintenance of financial system stability such as the European Financial Stability Facility and the European Stability Mechanism would be exempted from taxation.

Standard financial transactions of individuals and companies (making deposits, taking out loans, various forms of payment) would not be subject to taxation. The aim here is to protect the real sector against additional tax burdens. However, if individuals or business entities take up trading in securities or make derivative contracts via financial institutions, they will come within the scope of the FTT. Although natural persons and business entities of the real sector should not be considered liable to pay FTT, they could well end up bearing the economic burden of the taxation.

Although taxation would bypass the primary capital markets, the implications on the primary market itself are questionable. Will the economy be ready to finance its own operations with primary emission?

The implementation of an FTT would not be restricted to trading in organised markets, but would also take in over-the-counter markets, which would lead to an enlargement of the taxable amount. Transactions of larger amounts, because the regulatory requirements are not so exacting and because of the lower costs, are commonly conducted outside the organised markets. Also taxable would be repo and reverse repo operations, but only in the context of the initial exchange of instruments. The return transaction would not be subject to taxation (European Commission, 2103b).

According to the current proposal of the European Commission (2013b) structured products are explicitly subject to the FTT. The liability in derivatives trading

would be determined at the moment the derivative contract is made and at the time of the sale, transfer or replacement of derivative contracts, not taking cash flow into consideration, only the execution of contractual obligations. If it is generated, a transaction with an original financial instrument would be additionally taxed. It is necessary to point out that spot currency transactions are not subject to the FTT.

Derivative contracts that relate to trading in commodities (mostly gold, silver, precious metals or oil) without any real exchange of commodities would be subject to the payment of the FTT, for they are mostly speculative or aimed at the protection of assets without any real intention of physical assets being traded (European Commission, 2013b).

Investment and pension funds would be liable to pay the FTT in financial transactions in the management of the assets of the fund, but not when they are issuing their own securities (issue of certificates of the purchase or redemption of shares). Investment and pensions funds would be liable to pay the FTT in the scope of active trading.

It is planned to achieve the prevention of tax evasion, market disruptions and the redirection of transactions to a more favourable tax regime by a combination of the principle of residence as a basic principle of taxation with elements of the issuance principle. Such a regime will make it more difficult for taxpayers to relocate the place of their regular business activity, which will prevent tax evasion.

A financial institution that undertakes taxable financial transactions would be taxed according to the country of its residence, irrespective of the place of issuance of the actual transaction. If various financial institutions that have their place of residence in different member countries carry out financial transactions among themselves, each member state would have the right to withhold tax according to a set tax rate. The proposal of taxation according to European Commission based on double taxation in fact is not applicable nowadays in most European countries.

An FTT according to the proposal of the European Commission (2013b) could damage financial institutions, because taxation would diminish their competitiveness on the international market.

In the case of trading in securities carried out by non-residents, outside the jurisdiction of the FTT, issued in a country in which FTT is applied, the already mentioned residence principle is supplemented with the principle of country of issuance. Securities that are issued in a country where FTT is applied would be subject to the payment of the tax in the country of issuance, irrespective of where the transaction is conducted. If the parties in the transaction are not subject to the payment of the FTT according to the residence principle, the actual trading in securities issued in countries where FTT is applied would be taxable. Parties that trade in such securities would be considered liable to pay the tax in the country of issu-

ance, unless they can prove that there is no interrelation between the economic substance of the said financial transaction and the territory of the countries that do apply the FTT (European Commission, 2013b).

Such a provision does in fact reduce liquidity for all trading in such financial instruments will be taxable, which can have negative effects not only on investors but also on the issuers of securities. Proof of the lack of connection of a financial transaction with countries in which the FTT is applied is incumbent on the tax payers themselves.

3.2 THE MACROECONOMIC IMPACTS OF TAXATION

Most EU countries have important financial sectors, and their fiscal capacity is thus important.

Table 1

Revenue from the taxation of financial transaction in selected EU member countries, 2011

Member state	Taxation revenue	
	In million euros	As percentage of GDP
Belgium	132.0	0.04
Cyprus	1.4	0.01
Finland	249.0	0.13
France	1,100.0	0.06
Greece	92.0	0.04
Ireland	322.4	0.21
Luxembourg	605.0	1.41
Malta	2.1	0.03
United Kingdom	3,987.6	0.23

Source: European Commission (2013); Impact Assessment, pp. 62-68.

The figures in table 1 indicate how low the amount of tax collected is. Data from the European Commission (2013a) show that in 2011 various forms of the taxation of financial transactions including financial instruments existed in 11 member states. Although in 2011 there were some indications that financial transactions would be taxed in Italy, a new system of taxation was introduced in March 2013 for original securities and in July of the same year for derivatives (European Commission, 2016).

European Commission (2013a) predicts that the introduction of a common FTT would result in a fall of GDP of 0.28% over a period of 40 years. It predicts that if there is no FTT, that around 2050 European GDP would be 81.4% greater, and that it if is introduced, 81.1% greater than the present value. Some estimates say that the introduction of an FTT might lead to a long-term rise in GDP of at least 0.25% (Griffith-Jones and Persaud, 2012). However, the ultimate effect will depend primarily on the way in which the tax revenue is spent, that is, whether it will be channelled into boosting economic growth.

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3.3 IMPACTS OF TAXATION ON INVESTOR BEHAVIOUR

The introduction of an FTT will increase transaction costs, which will lead to a change in the way in which investors act on the market, because trading in certain instruments might become more attractive.

An FTT might tend to bring about a reduction of short-term high-frequency trades that are on the whole based on algorithms. Since the tax will increase transaction costs and hence reduce the margin, certain short-term trading will not be represented any more to a sufficient extent, for example, high frequency trading and delta-hedging.

In addition, financial internalisation will, because of the increased transaction costs, probably be replaced with financial intermediation.[1] Increased transaction costs will thus lead to an increase in the effective tax burden and a reduction of the sales margin.

Certain changes can be looked for in the behaviour of financial institutions that can replace repo operations with overnight loans or short-term liquidity loans (European Commission, 2013a).

Trading in derivative contracts might, according to the estimates of the European Commission (2013a) experience a fall of as much as 75%, because investors will lose their interest in it. Taxation of derivative contracts will lead to an increase in the effective tax rate with an increase in the effect of scale. Since the proposed tax rate on derivative trading is several times small than the rate on basic instruments, it will be more acceptable to make contracts with a financial ratio of less than 1:10. With ratios of greater than 1:10, entering into a derivative contract will result in a rise in the effective tax rate, which can be clearly seen in the following case. If a derivative contract with a notional amount of 1 million euros is made with the use of a ratio of 1:100 the economic value of the financial transaction will come to 10,000 euros. Irrespective of the fact that 10,000 euros will be paid by the transaction, the taxable amount is still the notional amount of 1 million euros. With the application of a tax rate of 0.01% on the notional amount, a tax liability of 100 euros is incurred. But if the tax paid is expressed as a ratio of the transaction amount of 10,000 euros, the effective tax rate comes to 1%. Hence, more pronounced use of the effect of scale in derivative operations will lead to an increase in the effect tax rate.

Taxation would probably result in a change in management strategy in investment and pension funds, from active management to buy and hold strategies.[2] An active strategy would lead to greater taxation. The tax itself should not affect management strategies of money funds.

[1] Financial internalisation implies more successive purchases and sales of securities before ultimate sale to the end user, and financial intermediation means the creation of mediators between seller and buyer without trading for own account.

[2] An active management strategy implies vigorous changes in the structure of the fund, while buy and hold means that the portfolio is kept more or less the same.

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Taking into account the very high quality protection mechanisms for preventing tax evasion with a combination of the principles of residence and issuance, it would not pay to shift the principal place of business of a financial institution outside the FTT jurisdiction as long as trading takes place with a counterparty located within the jurisdiction of the FTT or trading is done with instruments issued in a country in which FTT is applied. Payment of tax then can be avoided only by abandoning the market of the countries that apply the FTT, which is not very likely.

Because of the high fiscal and other aids to the financial sector, in the EU its fiscal contribution is being re-examined. By increased collaboration of member states the conditions might be created for easier harmonisation of taxation of the financial sector.

4 THE POSSIBILITIES FOR TAXING FINANCIAL TRANSACTIONS IN CROATIA

Although the FTT is not of recent date, and its application in various forms is widespread in the countries of the EU and elsewhere, the tax policy of the Republic of Croatia has avoided it, out of historical reasons and also in an attempt to increase the competitiveness of the domestic capital market.

Taking into account the stability of financial institutions, along with the regulatory measures of the Croatian National Bank (CNB), state interventions in the financial sector have not been necessary, on the contrary, in the crisis times, it made ample contributions to the public finances. For all these reasons, there has been little discussion of the introduction of an FTT.

Recent economic trends have reduced the attractiveness of investing in the financial markets. Regular turnover on the Zagreb Stock Exchange fell by 35% in 2012, trading in shares dropped by 44%, while because of investor caution, the turnover in bonds was more than twice that of 2011. In September 2012, trading in structured products started, including various forms of certificates (index, bonus, turbo certificates). Trading in these products was counted into regular trading (ZSE, 2013). The Zagreb Stock Exchange does not carry out trading in derivatives.

Since regulatory systems are an important component of contemporary stock exchange dealings for the sake promptly spotting and preventing manipulative trading patterns, early in 2015 the Zagreb Stock Exchange introduced a new system for the supervision of market segments – organised market, multilateral trading platforms and OTC markets (ZSE, 2016).

In 2013 there were no important changes in the total turnover, but it can be pointed out that there was a turnover 42 times greater in commercial bills, and a trade in structured products that was twice as high as in 2012 (ZSE, 2014).

In 2014 there was no significant rise in regular turnover in the total amount. Trade in shares, which accounted for almost 80% of overall turnover, remained at the

2013 level, while trade in bonds was increased by 65%, and structured product turnover fell by 44% (ZSE, 2015).

In 2015, regular trading was reduced by 9.3%, and OTC trading by 17.8%, which suggests that the capital market became less attractive to investors. Still there was a rise in the tourist industry segment (the CROBEXturist® index rose by 23.7% from 2014) (ZSE, 2016).

Table 2
Turnover on the Zagreb Stock Exchange 2011-2015 (in billion kuna)

	2011	2012	2013	2014	2015	Average	
						Value	Change (%)
Regular trading	5.9	3.9	3.8	3.9	3.5	4.2	-12.2
OTC transactions	18.2	19.3	18.2	26.6	21.9	20.8	4.7
Total	24.1	23.2	22.0	30.5	25.4	25.0	1.3

Source: Zagreb Stock Exchange (2013, 2014, 2015, 2016), author's elaboration.

Table 2 shows that in the 2011-2015 period the average value of a OTC transactions was almost five times the size of average regular trading on the Zagreb Stock Exchange.

Taking into consideration as taxable amount the average value of all transactions (regular trading and OTC transactions) the revenues from a possible introduction of an FTT might be simulated. On the assumption that both parties in a financial transaction are liable to the tax and that they are Republic of Croatia residents, the taxable amount (an average of 25 billion kuna) is doubled, and comes to 50 billion. If the minimum tax rate of 0.1% is applied, the tax revenue will come to 50 million kuna. For the sake of a comparison of the importance of these revenues from taxation in total revenues and in the tax revenues of the government budget, table 3 shows total tax revenues of the budget in 2015.

Table 3
Revenue of the government budget in 2015 (in billion kuna)

Kind of revenue	Amount of revenue
Tax revenues	68.0
Contributions	22.8
Grants	5.0
Revenue from assets	2.8
Revenue from administrative fees	3.6
Other revenue	6.9
Total revenue	109.1

Source: Ministry of Finance (2016).

If, then, the simulated revenue from FTT is compared with the figures in table 3, in 2015 it would have come to no more than 0.05% of total revenues of the government budget.

It can be concluded, then, that by taxing transactions on the Croatian capital market would be generated relatively small amounts of tax revenue and that the taxation of turnover in securities on the Zagreb Stock Exchange would be insufficiently effective. If one takes into consideration the essential administrative costs involved in the collection of the tax, although they should not be very great because of the well-arranged computer infrastructure, the actual amount of tax collected would not justify it being employed in practice. This form of taxation, then, would be insufficiently productive. If the possible impacts on the volume of trading, liquidity, cost of capital and market efficiency are considered, then there are no practical grounds for the taxation of the Croatian capital market.

However, when the fact that according to the EU-level proposal for the taxation of the transactions of financial institutions primarily according to the principle of residence is taken into consideration, the real tax revenues could be very different from those of the simulation. Transactions on the Zagreb Stock Exchange are conducted by residents and non-residents. In the Republic of Croatia, only the transactions of residents would be taxed, irrespective of the place in which the transactions are carried out. Real tax revenues would then include all the transactions of residents and the transactions of non-residents to the extent that they are trading in financial instruments issued in the Republic of Croatia and are not at the same time residents of some EU member state in which a common FTT would be in application. Hence all such transactions need simulating.

Tax revenues would certainly cover transactions in derivative contracts among financial institutions. According to projections of the European Commission (2013d) revenue from the taxation of derivative contracts would come to about two thirds of all revenue from an FTT.

A preliminary analysis of the possibilities of taxing financial transactions in the Republic of Croatia according to the proposal to introduce an FTT at the EU11 level suggests that the Croatian capital market is still not sufficiently developed to be able to generate abundant revenues from such a tax.

If domestic financial institutions carry out taxable financial transactions with financial institutions in the EU11 or trade in financial instruments issued in these countries, they would be obliged to pay FTT in the country of residence of the counterparty or the country of issuance of the security, which would lead to a drain of tax revenue outside the borders of the Republic of Croatia. Hence increased collaboration of the Republic of Croatia concerning the issue of taxing financial transactions would be justified in order to ensure that Republic of Croatia residents pay tax in their own country.

5 CONCLUSION

One of the possible solutions for a more equitable contribution of the financial sector to public finances is the reinforcement of the role of indirect taxation of financial transactions. The global trend toward the reduction of the taxation of financial transactions in the last two decades because of the liberalisation of capital flows has been replaced with a more powerful role for the state in the regulation of financial markets. Although taxation of financial transactions is not important in overall public revenues, developed world economies are not about to give up on this form of taxation, but want to increase its fiscal role.

If one considers the taxation from the standpoint of its impact on financial markets, an FTT will certainly increase transaction costs. Numerous empirical investigations about the impact of an FTT on the function of financial markets have led to various conflicting conclusions, largely related to the microstructure of a given market. There is a consensus that taxation will reduce the number of financial transactions generated as well as the value of financial instruments, which will bring about an increase in the cost of capital. There are opposed ideas about the effect on liquidity and volatility. Tax revenues, then, depend considerably on the reaction of the market to increased transaction costs consequent upon the introduction of the tax.

Expensive government rescue operations have forced the European Commission to re-examine the fiscal contribution made by the financial sector; but because of the different national systems of taxing financial transactions, there is a lack of harmonisation. With the establishment of the enhanced cooperation system in the EU11, conditions can be created for an easier establishment of a consensus among all the members of the EU and greater harmonisation. The actual execution of common taxation has a broad tax base since it provides for the taxation of all transactions in basic and derivative instruments both inside and outside organised markets. With a combination of the principles of residence and issuance, it is possible to have good mechanisms of protection against tax evasion. The future of common taxation at EU level will depend on the wiliness of all members to find a high quality, effective and generally accepted manner of taxing financial transactions.

A preliminary analysis of the possibilities of taxing the Croatian capital market has shown that there are no practical grounds for the implementation of such a tax, because the insufficiently developed market would be incapable of generating sufficiently abundant tax revenues. However, if financial transactions are not taxed in the Republic of Croatia, Croatian residents might be taxed in EU member states that do apply this tax, which would lead to an outflow of tax revenues, and so it would be justified for the Republic of Croatia to join in the procedure of enhanced cooperation to do with the FTT. It can, then, be concluded that the common taxation of financial transactions at the EU level could meet the interests of the Republic of Croatia better than unilateral taxation.

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The costs and benefits of the taxation and also of the non-taxation of financial transactions in the Republic of Croatia will be able to be seen better when the FTT is in the phase of practical implementation in the EU. Then it will be certainly possible to carry out a better and more trustworthy analysis of the effects of the taxation.

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